

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF OHIO
Western Division

_____)	
THE PROCTER & GAMBLE COMPANY,)	
)	
Plaintiff,)	
)	Civil Action No. C-1-02-393
v.)	
)	Hon. Walter Rice (C.J.)
THE COCA-COLA COMPANY,)	Hon. Sharon Ovington (Magistrate)
)	
Defendant.)	<u>PUBLIC VERSION</u>
_____)	

**THE PROCTER & GAMBLE COMPANY'S OPENING
CLAIM CONSTRUCTION BRIEF**

Mark Vander Laan (Bar No. 0013297)
Dinsmore & Shohl LLP
1900 Chemed Center
255 East Fifth Street
Cincinnati, OH 45202-3172
(513) 977-8200

William F. Lee (admitted *pro hac vice*)
David B. Bassett (admitted *pro hac vice*)
Vinita Ferrera (admitted *pro hac vice*)
Mary Rose Scozzafava, Ph.D. (admitted *pro hac vice*)
Richard W. O'Neill (admitted *pro hac vice*)
Benjamin Stern (admitted *pro hac vice*)
Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
(617) 526-6000

Dated: January 16, 2004

Table of Contents

	Table of Authorities	ii
I.	INTRODUCTION	1
II.	BACKGROUND	2
	A. The Recognized Need for Calcium Supplementation	2
	B. The Difficulties with Fortifying Fruit Juice with Calcium	4
	C. The Invention of the ‘847 Patent	5
	D. Dr. Heckert’s Patent Application	6
III.	CLAIM CONSTRUCTION PRINCIPLES	7
	A. The Claim Language	9
	B. The Specification	10
	C. The Prosecution History	11
IV.	THE DISPUTED CLAIM TERMS	12
	A. “Acid Component Comprising a Mixture of Citric Acid and Malic Acid”	13
	B. “Fruit Juice Beverage”	17
V.	CONCLUSION	20

Table of Authorities

Federal Cases

<i>Abbott Laboratories v. Novopharm Ltd.</i> , 323 F.3d 1324 (Fed. Cir. 2003).....	11
<i>Amgen, Inc. v. Hoechst Marion Roussel, Inc.</i> , 314 F.3d 1313 (Fed. Cir. 2003)	14
<i>Apex, Inc. v. Raritan Computer, Inc.</i> , 325 F.3d 1364 (Fed. Cir. 2003)	10
<i>Becton Dickinson & Co. v. C.R. Bard, Inc.</i> , 922 F.2d 792 (Fed. Cir. 1990)	8
<i>Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.</i> , 262 F.3d 1258 (Fed. Cir. 2001)	8, 9
<i>Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.</i> , 334 F.3d 1294 (Fed. Cir. 2003)	10, 16
<i>CCS Fitness, Inc. v. Brunswick Corp.</i> , 288 F.3d 1359 (Fed. Cir. 2002)	9
<i>Digital Biometrics, Inc. v. Identix, Inc.</i> , 149 F.3d 1335 (Fed. Cir. 1998).....	8
<i>Genentech, Inc. v. Chiron Corp.</i> , 112 F.3d 495 (Fed. Cir. 1997)	14
<i>Hewlett-Packard Co. v. Repeat-O-Type Stencil Mfg. Corp., Inc.</i> , 123 F.3d 1445 (Fed. Cir. 1997).....	14
<i>Inverness Med. Switzerland GmbH v. Warner Lambert Co.</i> , 309 F.3d 1373 (Fed. Cir. 2002).....	9
<i>Jack Guttman, Inc. v. Kopykake Enter. Inc.</i> , 302 F.3d 1352 (Fed. Cir. 2002).....	11, 18
<i>Johnson Worldwide Assoc., Inc. v. Zebco Corp.</i> , 175 F.3d 985 (Fed. Cir. 1999).....	9, 11
<i>KCJ Corp. v. Kinetic Concepts, Inc.</i> , 223 F.3d 1351 (Fed. Cir. 2000).....	11
<i>Markman v. Westview Instruments, Inc.</i> , 52 F.3d 967 (Fed. Cir. 1995) (en banc), <i>aff'd</i> , 517 U.S. 370 (1996).....	7, 8, 11
<i>Netword, LLC v. Centraal Corp.</i> , 242 F.3d 1347 (Fed. Cir. 2001).....	8
<i>Renishaw Plc v. Marposs Societa Per Azioni</i> , 158 F.3d 1243 (Fed. Cir. 1998)	11, 18
<i>Rexnord Corp. v. Laitram Corp.</i> , 274 F.3d 1336 (Fed. Cir. 2001)	9
<i>Riverwood Int'l Corp. v. R.A. Jones & Co., Inc.</i> , 324 F.3d 1346 (Fed. Cir. 2003).....	9
<i>Tate Access Floors, Inc. v. Maxcess Technologies, Inc.</i> , 222 F.3d 958 (Fed. Cir. 2000).....	10
<i>N. Telecom Ltd. v. Samsung Elec. Co., Ltd.</i> , 215 F.3d 1281 (Fed. Cir. 2000).....	10

<i>Teleflex, Inc. v. Ficosa N. America Corp.</i> , 299 F.3d 1313 (Fed. Cir. 2002).....	11
<i>Texas Digital Sys., Inc. v. Telegenix, Inc.</i> , 308 F.3d 1193 (Fed. Cir. 2002).....	9, 13
<i>Vitronics Corp. v. Conceptronic, Inc.</i> , 90 F.3d 1576 (Fed. Cir. 1996).....	<i>passim</i>

Federal Statutes

35 U.S.C. § 112	7, 8, 10
35 U.S.C. § 154	8

Federal Regulations

37 C.F.R. § 1.75(c)	7
---------------------------	---

Other Authorities

Donald S. Chisum, CHISUM ON PATENTS (2003 & 2003 Cum. Supp.).....	6, 7
---	------

**THE PROCTER & GAMBLE COMPANY'S OPENING
CLAIM CONSTRUCTION BRIEF**

I. INTRODUCTION

This case involves the infringement of United States Patent No. 4,722,847 (the “’847 patent”).¹

The named inventor of the ‘847 patent is David C. Heckert, a former Procter & Gamble (“P&G”) employee. Dr. Heckert was the first person to solve the long-standing, but unresolved, problem of how to fortify fruit juices with nutritionally significant amounts of calcium without also creating adverse reactions, such as foul odors, off-tastes, and unnatural appearance. In recognition of this commercially significant invention, the ‘847 patent issued on February 2, 1988 with 18 claims relating to calcium-supplemented fruit juice beverages and concentrates. Although P&G alleges that The Coca-Cola Company (“Coca-Cola”) is infringing 13 of those 18 claims, only two of the claim terms are in dispute: “fruit juice beverage” and “acid component comprising a mixture of citric acid and malic acid”.²

To put the asserted claims of the ‘847 patent in context, this brief first provides an overview of the invention described and claimed in the ‘847 patent. In accordance with the guidelines of the Federal Circuit, P&G then proposes a straightforward construction for the claims at issue based on the intrinsic evidence of record. Specifically, with respect to the phrase “acid component comprising a mixture of citric acid and malic acid,” the relevant dictionary definitions, the ‘847 patent specification, and the prosecution history all make clear that this

¹ A copy of the ‘847 patent is attached as Exhibit 1 in the Appendix (“App.”) filed herewith.

² Coca-Cola maintains that certain of the claims are not part of this case because those claims are not identified explicitly in P&G’s complaint. P&G disagrees. Nevertheless, to resolve this dispute, on August 11, 2003, P&G filed a Motion for Leave to File Second Amended Complaint that, *inter alia*, identifies with even greater specificity those Coca-Cola products alleged to be infringing the ‘847 patent. The Court has not yet ruled on that Motion. Consistent with P&G’s position, this brief proposes a construction for all the claims that P&G contends are at issue in this case.

phrase refers to the total acids in the product, which, at a minimum, include citric acid and malic acid. With respect to the term “fruit juice beverage,” P&G clearly and expressly defined that term in the patent specification as a “fruit juice product which is in a single-strength, ready-to-serve, drinkable form,” and, under Federal Circuit law, that definition controls.

II. BACKGROUND

A. The Recognized Need for Calcium Supplementation

Calcium is the most abundant mineral in the human body. App., Ex. 2, col. 1, lines 14-15. Approximately 99% of the calcium in the body is found in bones, where it provides structural skeletal support to the human body. *Id.*, col. 1, lines 19-20; Ex. 3 at PGJ0000401, 403. The remaining 1% is found in the blood and other body fluids, where, among other things, it helps to regulate blood clotting, transmission of neural impulses, heart beat, muscle contraction, and the flow of fluids into and out of cells. App., Ex. 2, col. 1, lines 18-26; Ex. 4 at TCCC001750. When a person’s daily intake of calcium is insufficient to perform these functions, the body draws upon the calcium in the person’s bones. App., Ex. 4 at TCCC001750.

During the early years of life, calcium is deposited in the bone as the skeleton grows. *Id.* After skeletal maturity is reached, at around age 40, a steady decline in bone mass and density occurs. App., Ex. 3 at PGJ0000403. In women, who typically have a lesser peak bone mass than men, this loss of bone mass is especially marked after menopause. App., Ex. 5 at TCCC002352.

When a person’s bone mass declines below a certain threshold, that individual is at increased risk for fracture, a condition known as osteoporosis. App., Ex. 3 at PGJ0000400. Osteoporosis is a major disease of the elderly in the United States, more common among people of this age group than heart attacks, strokes, diabetes, rheumatoid arthritis, or breast cancer.

App., Ex. 2, col. 1, lines 37-39; Ex. 4 at TCCC001749. According to some estimates, as many as 20 million Americans suffer from osteoporosis; osteoporosis affects one in four women over the age of 60. *See* App., Ex. 4 at TCCC001748; Ex. 2, col. 1, lines 44-46. Osteoporosis is responsible for more than 1.3 million fractures annually. App., Ex. 4 at TCCC001748.

Scientific evidence points to a strong relationship between calcium intake and osteoporosis. Adequate calcium intake during childhood and adolescence contributes to greater peak bone mass, potentially reducing the risk of osteoporosis later in life. App., Ex. 2, col. 1, lines 49-55. Conversely, inadequate calcium intake during the developmental years may hinder optimal bone calcium accretion, potentially increasing the likelihood that an individual will develop osteoporosis. *Id.*, col. 1, lines 31-33; Ex. 6 at TCCC002190.

Popular awareness of the relationship between calcium consumption and bone health increased markedly in the mid-1980s following a 1984 National Institutes of Health Consensus Conference on Calcium that concluded that calcium intake among the U.S. adult population was too low to support optimal bone health. *See* App., Ex. 4 at TCCC001748; Ex. 7 at TCCC001785. Due at least in part to the findings and recommendations generated by this Conference, in the mid-1980s the medical community and the general public began searching for new and better ways to increase calcium intake. *See id.*

In the United States, dairy products, particularly milk, serve as the primary dietary sources of calcium. App., Ex. 1, col. 1, lines 30-31; Ex. 5 at TCCC002353. Accordingly, efforts to increase calcium intake have traditionally focused on educating people about the importance of calcium and the need to consume more dairy products. *See, e.g.*, App., Ex. 4 at TCCC001751; Ex. 7 at TCCC001787. However, many people stop drinking milk and reduce their intake of other dairy products after adolescence. App., Ex. 1, col. 1, lines 32-36; Ex. 6 at TCCC002191.

Others avoid such products because of their high caloric and cholesterol content. App., Ex. 1, col. 1, line 40; Ex. 2, col. 2, lines 65-67. In addition, a significant portion of the population becomes lactose intolerant as they reach maturity, resulting in gastrointestinal problems if they consume milk. App., Ex. 1, col. 1, lines 41-44; Ex. 2, col. 2, lines 64-65. Still others simply do not like the taste of milk. App., Ex. 1, col. 1, lines 40-41; Ex. 2, col. 2, lines 67-68.

One alternative source of calcium is calcium supplements, in the form of tablets or powders to be consumed by individuals on a regular basis. However, effective use of calcium supplements requires a high level of commitment and motivation that must be sustained over a long period of time. App., Ex. 5 at TCCC002354. In addition, such supplements may create undesirable imbalances with other nutrients, such as zinc and iron. *Id.*

These considerations led P&G and others in the mid-1980s to examine alternative, more appealing sources of calcium. P&G identified calcium-fortified fruit juices as a particularly attractive alternative because individuals of all ages regularly consume such products in quantities sufficient to potentially provide nutritionally beneficial amounts of calcium. *See App.*, Ex. 1, col. 1, lines 45-56.

B. The Difficulties with Fortifying Fruit Juice with Calcium

Milk, on average, contains about 0.12% calcium by weight. *Id.*, col. 1, lines 59-60. Addition of such high levels of calcium to fruit juice is fraught with various difficulties, none of which had been overcome prior to Dr. Heckert's work. *See id.*, col. 1, lines 57-59.

First, the addition of nutritionally significant levels of calcium to juice can have a significantly negative effect on the taste or odor of the juice. *Id.*, col. 1, line 63 – col. 2, line 9. For example, Dr. Heckert observed that addition of high levels of calcium to juice can, in some cases, “generate undesirable cooked/browned off-flavors,” “cause desirable aroma and flavor

compounds to be stripped from the juice,” “impart undesirable brackishness to the juice,” or “impart an unpleasant spoiled fermented note.” *Id.*, col. 1, line 67 – col. 2, line 4 & col. 11, lines 25-26. Coca-Cola, in its own patent for calcium-fortified foods, similarly noted that attempts to add nutritionally significant levels of calcium to beverages “produce[d] an unpleasant gritty drink.” App., Ex. 2, col. 3, lines 64-65. *See also* Ex. 8 at 93-95 (**REDACTED – HIGHLY CONFIDENTIAL MATERIAL SUBJECT TO PROTECTIVE ORDER**). In other instances, the addition of calcium can cause the juice to develop highly unpleasant odors. *See* App., Ex. 9 at PGJ0013939.

Second, addition of high levels of calcium to juice can have a negative effect on the appearance of the juice, causing it to change color, to foam, or to form gelatinous material or precipitates. *See id.* at PGJ0013939-13940; Ex. 2, col. 3, lines 65-68 (“[A]t calcium levels in the drink that are needed to promote significant absorption levels in the gut, the calcium salts begin to exhibit precipitation.”); Ex. 8 at 98-101 (**REDACTED – HIGHLY CONFIDENTIAL MATERIAL SUBJECT TO PROTECTIVE ORDER**).

To achieve the aim of producing a beverage that consumers would drink on a regular basis (and thereby obtain adequate amounts of calcium), it was necessary to overcome these problems. Despite the highly desirable goal of obtaining calcium-supplemented fruit juices without adverse taste, odor, or appearance, prior to Dr. Heckert’s work, such a product had not been achieved. With the filing of Dr. Heckert’s patent application on May 7, 1986, P&G became the first to disclose such a product.

C. The Invention of the ‘847 Patent

The ‘847 patent discloses fruit juice beverages and fruit juice concentrates containing amounts of calcium ranging from approximately half the amount found in milk (*i.e.*, 0.05% by

weight) to approximately twice the amount found in milk (*i.e.*, 0.26% by weight).

As revealed in the '847 patent itself, the key aspect of Dr. Heckert's invention is the acid composition of the final product. *See* App., Ex. 1, col. 5, lines 56-59. Dr. Heckert observed that orange juice (and other fruit juice) naturally contains varying amounts of citric acid and malic acid. *Id.*, col. 2, lines 16-18. Dr. Heckert was the first to recognize that, to attain the desired amount of calcium without negatively affecting the taste, odor, or appearance of the juice, it is necessary to control both the total amount of acid in the beverage or concentrate at issue as well as the ratio of citric acid to malic acid in the product. *Id.*, col. 6, lines 1-4 & lines 18-21, col. 13, lines 20-23.

Dr. Heckert further recognized that the level of protein, sugar, and chloride present in the product at issue also could affect the flavor, odor, and appearance of the beverage or concentrate. *Id.*, col. 6, lines 61-64, col. 7, lines 13-16 & lines 23-27. To this end, the '847 patent prescribes limits on the amount of such substances in the final product. *Id.*, col. 13, lines 16, 25, 27.

D. Dr. Heckert's Patent Application

The '847 patent was issued from Application No. 860,607 (the "'607 application"). The '607 application initially contained 28 claims. *See* App., Ex. 9 at PGJ0013889-13893. The first 18 application claims ultimately issued as Claims 1-18 of the '847 patent. *Id.* at PGJ0013959. The remaining 10 claims from the '607 application pertained to a process for producing the calcium-supplemented fruit juice beverages and concentrates of Claims 1-18. *Id.* at PGJ0013891-13893.³ After Claims 19-28 were twice rejected, P&G voluntarily withdrew those

³ Patents are granted only on certain tangible subject matter. Under the patent statutes, a patent may be granted on a "process" (or method) or a "product" (or apparatus). A "process" patent claims a way to produce a result, while a "product" patent may claim a machine, composition of matter, or article of manufacture. *See* 1 Donald S. Chisum, CHISUM ON PATENTS §§ 1.02-1.03 at 1-11, 1-78 (2003). The claims of a "product" patent are deemed to read on any product that meets all of the limitations claimed in the patent, regardless of the process by which the product is made. *Id.*, § 1.03 n.2 (2003 Cum. Supp.) ("A product patent claims a structural entity that, (continued on next page . . .)

claims so as to allow the product claims 1-18 to issue. *Id.* at PGJ0013957.⁴ Thus, all of the issued claims of the ‘847 patent are product claims; none of the claims of the ‘847 patent claim any particular process of producing those products.

Claim 1 of the ‘847 patent claims single-strength fruit juice beverages that contain solubilized calcium at levels ranging from about 0.05% by weight to about 0.26% by weight. App., Ex. 1, col. 13, lines 15-27. Claims 2-11, which depend from Claim 1,⁵ claim narrower variations of the beverages claimed in Claim 1. *Id.*, col. 13, line 28 – col. 14, line 12. Claim 12 of the ‘847 patent relates to fruit juice concentrates containing solubilized calcium at levels ranging from about 0.15% by weight to about 1.30 % by weight. *Id.*, col. 14, lines 13-23. Claims 13-18, which depend from Claim 12, define concentrates that are narrower variations of the concentrates claimed in Claim 12. *Id.*, col. 14, lines 24-40.

III. CLAIM CONSTRUCTION PRINCIPLES

A patent is a fully integrated written instrument. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). A patent, by statute, must provide a written description of the invention and a disclosure of the best mode known to the inventor for practicing the invention, so as to enable one of ordinary skill in the art to make and use the invention. 35 U.S.C. § 112. The portion of the patent that contains the written description and the disclosure of the best mode is typically referred to as the patent “specification.” *Id.* A patent must also contain claims “particularly pointing out and distinctly

though some process must be undertaken in order to create it, is in no way defined or limited by how it is made.”).

⁴ P&G later submitted a separate application incorporating the substance of Claims 19-28 (as well as an additional Claim 29), and these claims ultimately issued as United States Patent No. 4,919,963 (the “‘963 patent”). See App., Ex. 10. Because the product claims of the ‘847 patent and the process claims of the ‘963 patent derived from the same ‘607 application, they share a nearly identical specification.

⁵ A “dependent claim” is one that refers back to an earlier claim and is considered to include all of its own limitations as well as those of the referenced claim. 37 C.F.R. § 1.75(c).

claiming the subject matter which the applicant regards as his invention.” *Id.* The claims of the patent, as properly construed, serve a public notice function by providing the measure of a patentee’s right to exclude others from practicing the invention. 35 U.S.C. § 154.

Parties, however, frequently disagree on how specific terms or phrases in patent claims should be interpreted or construed. Accordingly, the court is required to resolve such disputes and to “construe” the claims to determine their true meaning and scope. *Markman*, 52 F.3d at 976-979. That process is typically referred to as “claim construction,” and is a matter of law for the Court. *Id.* at 979. “The role [of claim construction] is neither to limit nor to broaden the claims, but to define, as a matter of law, the invention that has been patented.” *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1352 (Fed. Cir. 2001). In construing the claims, courts are not permitted to rewrite the claims. *Becton Dickinson & Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 799 n.6 (Fed. Cir. 1990). Rather, “[c]laim construction’ is the judicial statement of what is and is not covered by the technical terms and other words of the claims.” *Netword*, 242 F.3d at 1352.

The Federal Circuit has instructed that “[t]he actual words of the claim are the controlling focus” for purposes of construing the claims. *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1344 (Fed. Cir. 1998). The wording of the claims, however, is viewed in conjunction with the patent specification and the “prosecution history” (*i.e.*, the public record of the exchanges between the applicant and the United States Patent and Trademark Office). *Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1267-68 (Fed. Cir. 2001). “It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification and, if in evidence, the prosecution history. . . . Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.” *Id.* (quoting *Vitronics Corp. v.*

Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

A. The Claim Language

Any proper claim construction must begin with the actual language of the claims. The Federal Circuit has recently and repeatedly emphasized the “heavy presumption” that patent claim terms be accorded the “full scope” of their “ordinary meaning,” without being limited by particular examples or statements in the specification or prosecution history. *See, e.g., Riverwood Int’l Corp. v. R.A. Jones & Co., Inc.*, 324 F.3d 1346, 1357 (Fed. Cir. 2003) (“The terms used in the claims bear a ‘heavy presumption’ that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art . . . [u]nless compelled otherwise, a court will give a claim term the full range of its ordinary meaning.”); *Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202 (Fed. Cir. 2002) (same); *see also CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (same) (citing *Johnson Worldwide Assoc., Inc. v. Zebco Corp.*, 175 F.3d 985, 989 (Fed. Cir. 1999). “In short, a court must presume that the terms in the claims mean what they say.” *Id.*

Dictionary definitions can provide a useful resource in guiding a court’s inquiry into the ordinary or plain meaning of a term. *Inverness Med. Switzerland GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1378 (Fed. Cir. 2002) (“It is well settled that dictionary definitions provide evidence of a claim term’s ‘ordinary meaning’.”); *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1344 (Fed. Cir. 2001) (“Sensibly enough, our precedents show that dictionary definitions may establish a claim term’s ordinary meaning.”).⁶

⁶ Even though one reasonably might consider a dictionary to be extrinsic evidence, the Federal Circuit has held that dictionaries “are objective resources that serve as reliable sources of information on the established meanings that would have been attributed to the terms of the claims by those of skill in the art,” and therefore are appropriately considered in determining the plain meaning of the claim terms. *Texas Digital*, 308 F.3d at 1202-03.

B. The Specification

The second piece of “intrinsic” evidence to be considered in a proper claim construction is the patent specification, which provides a written description of the invention. 35 U.S.C. § 112. The Federal Circuit has stated that “the specification is always highly relevant to the claim construction analysis. Usually it is dispositive; it is the single best guide to the meaning of a disputed term.” *Vitronics*, 90 F.3d at 1582.

In general, limitations expressed only in the specification should **not** be read to narrow or limit a claim. *Tate Access Floors, Inc. v. Maxcess Technologies, Inc.*, 222 F.3d 958, 966 (Fed. Cir. 2000) (“Although claims must be read in light of the specification of which they are a part, it is improper to read limitations from the written description into a claim.”) (internal citations omitted); *N. Telecom Ltd. v. Samsung Elec. Co., Ltd.*, 215 F.3d 1281, 1290 (Fed. Cir. 2000) (“This court has repeatedly and clearly held that it will not read unstated limitations into claim language.”).

Moreover, the Federal Circuit has cautioned repeatedly against limiting claims to the preferred embodiments described in the specification. *See Apex, Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1374 (Fed. Cir. 2003) (rejecting defendant’s “classic attempt to limit the scope of a claim limitation to the preferred embodiment”); *Brookhill-Wilk I, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1301 (Fed. Cir. 2003) (holding that “statements from the description of the preferred embodiment are simply that – descriptions of a **preferred** embodiment,” and do not limit or narrow the scope of the claimed invention) (emphasis added). Therefore, unless the specification clearly disclaims alternative configurations, claims should not be restricted to particular embodiments described in the specification. *Tate Access Floors*, 222 F.3d at 966 (“[P]articular embodiments appearing in the specification will not be read into the claims when the claim language is broader than such embodiments.”) (internal quotation marks omitted).

The Federal Circuit, however, has long recognized that the specification trumps the ordinary meaning of the claims in the limited circumstance when the patentee chooses to be his or her own “lexicographer” – that is, when the patentee clearly sets forth in the specification an explicit definition for a claim term. *See Abbott Laboratories v. Novopharm Ltd.*, 323 F.3d 1324, 1330 (Fed. Cir. 2003) (affirming district court’s reliance on explicit definition of disputed term contained in the specification); *Johnson Worldwide*, 175 F.3d at 990. If the patent specification defines a particular term, it acts as a dictionary for interpreting that term. *Renishaw Plc v. Marposs Societa Per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998); *Vitronics*, 90 F.3d at 1582. This is true **even if** the definition in the specification is broader than (or otherwise varies from) the meaning that persons of skill in the art would customarily ascribe to the term. *Jack Guttman, Inc. v. Kopykake Enter. Inc.*, 302 F.3d 1352, 1360-61 (Fed. Cir. 2002).

C. **The Prosecution History**

The final piece of “intrinsic” evidence to be considered in construing the language of patent claims is the “prosecution history” of the patent. This history is comprised of the original patent application, the communications between the inventors and the Patent Examiner concerning that application, materials considered by the Patent Examiner during prosecution, and all of the various proposed versions of the claims. While the prosecution history may assist claim interpretation, it “cannot ‘enlarge, diminish, or vary’” the claim terms, except in certain limited circumstances, such as when the patentee clearly and unambiguously disclaims a claim’s scope during prosecution. *See Teleflex, Inc. v. Ficosa N. America Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002); *see also KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000); *Markman*, 52 F.3d at 980.

IV. THE DISPUTED CLAIM TERMS

P&G has asserted that Coca-Cola is infringing 13 claims of the '847 patent (Claims 1, 2, 3, 7, 8, 10, 11, 12, 13, 14, 15, 16, and 17). For purposes of claim construction, however, the Court can focus on the language of Claim 1, which contains all disputed claim terms (noted with emphasis below).

Claim 1 reads:

- A calcium-supplemented single-strength fruit juice beverage, which is substantially free of added protein and which comprises:
- a. from about 0.06⁷ to about 0.26% by weight solubilized calcium;
 - b. from about 0.4 to about 4% by weight of an acid component comprising a mixture of citric acid and malic acid in a weight ratio of citric acid: malic acid of from about 5:95 to about 90:10;
 - c. at least about 45% fruit juice;
 - d. a sugar content from about 2° to about 16° Brix; and
 - e. no more than about 0.07% by weight chloride ion.

App., Ex. 1, col. 13, lines 15-27 (emphasis added).

While Coca-Cola will almost certainly seek to complicate the claim construction analysis needlessly in an attempt to avoid a finding of infringement (or to invalidate the '847 patent), the fact is that (unlike for some patents), the proper claim construction of the '847 patent is straightforward. As to each claim term, the plain meaning, the specification, and the file history are all consistent and clear.

It appears that Coca-Cola agrees with the vast majority of P&G's proposed claim constructions. Indeed, P&G understands that only two claim terms are in dispute: "acid

⁷ Following issuance of the patent, P&G filed a certificate of correction requesting that the lower limit of solubilized calcium be changed from 0.06 to 0.05. See App., Ex. 9 at PGJ0013963. Accordingly, Claim 1 actually covers products containing from about 0.05 to about 0.26% by weight solubilized calcium.

component comprising a mixture of citric acid and malic acid” and “fruit juice beverage”. The remainder of P&G’s brief will therefore focus on the proper construction of those two terms. P&G would refer the Court to the claim chart attached hereto as Exhibit A for complete constructions of each of the asserted claims.

A. “Acid Component Comprising a Mixture of Citric Acid and Malic Acid”

‘847 claim elements: Claim 1(b) requires “from about 0.4 to about 4% by weight of an *acid component comprising a mixture of citric acid and malic acid* in a weight ratio of citric acid:malic acid of from about 5:95 to about 90:10.” App., Ex. 1, col. 13, lines 20-22.⁸

P&G’s construction: The term “acid component comprising a mixture of citric acid and malic acid” refers to the total acids in the product, which include, at a minimum, citric acid and malic acid.

The key limitation in dispute is the phrase “acid component comprising a mixture of citric acid and malic acid.” As mandated by the Federal Circuit, P&G’s construction of this phrase is consistent with both the plain meaning of the individual claim terms “acid component,” “comprising,” and “mixture,” as well as the specification and prosecution history.

The term “component” is defined as a constituent or element of something larger. *See, e.g.,* App., Ex. 11, THE AMERICAN HERITAGE DICTIONARY SECOND COLLEGE EDITION (1985) (component 1: “a constituent element, as of a system”); WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY UNABRIDGED (1986) (component 1: “a constituent part”).⁹ In this case, the term “acid component” merely refers to that part of the product that is present as acid.

The term “comprising” is “a term of art used in claim language which means that the

⁸ Whatever construction the Court adopts for this term should also be applied to Claims 3, 8, 10, 12, 14, and 16.

⁹ It is well-established that in the event that a disputed term has “multiple dictionary definitions, some having no relation to the claimed invention,” the intrinsic record must “be consulted to identify which of the different possible dictionary meanings of the claim terms in issue is the most consistent with the use of the words by the inventor.” *Texas Digital*, 308 F.3d at 1203. If more than one of the dictionary definitions is consistent with the use of the words in the intrinsic record, then all such definitions may apply. *Id.*

named elements are essential, but that other elements may be added and still form a construct within the scope of the claim.” *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1344-1345 (Fed. Cir. 2003) (quoting *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997)). The word “‘including’ is synonymous with ‘comprising,’ thereby permitting the inclusion of unnamed components.” *See Hewlett-Packard Co. v. Repeat-O-Type Stencil Mfg. Corp., Inc.*, 123 F.3d 1445, 1451 (Fed. Cir. 1997). Consistent with the ordinary use of this term, in the specification, P&G stated that “the term ‘comprising’ means various components can be conjointly employed [sic] in the fruit juice beverages and juice concentrates of the present invention. Accordingly, the term ‘comprising’ encompasses the more restrictive terms ‘consisting essentially of’ and ‘consisting of’.” App., Ex. 1, col. 5, lines 10-15.

Finally, the term “mixture” is defined as matter that consists of two or more separate substances. *See, e.g.*, App., Ex. 12, WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY UNABRIDGED (1986) (mixture 1b(2): “the relative proportions of constituents”; 2a: “a portion of matter consisting of two or more components that do not bear a fixed proportion to one another and that however thoroughly commingled are regarded as retaining a separate existence – usu. distinguished from *complex* and *compound*”); THE AMERICAN HERITAGE DICTIONARY SECOND COLLEGE EDITION (1985) (mixture 2: “Something consisting of diverse elements;” mixture 5: “A composition of two or more substances that are not chemically bound to each other”). In this case, the constituent substances are citric acid and malic acid.

Collectively, the definitions of these terms demonstrates that the plain meaning of the phrase “acid component comprising a mixture of citric acid and malic acid” refers to the portion of the claimed product that constitutes acids, and requires that this portion of the product consist of at least citric acid and malic acid, but does not exclude the presence of other acids.

Coca-Cola has indicated that it intends to argue that Claim 1(b) does not merely describe the total acids in the final product, but rather that it requires the addition of an acid component consisting of citric acid and malic acid. This position should not be surprising. Coca-Cola's hired expert has conceded that, unless the acid component element is construed as Coca-Cola advocates, Coca-Cola has no noninfringement argument. *See App., Ex. 13 at 181-182.*

Coca-Cola's proposed construction of the claims is unsupported by, and indeed is inconsistent with, the plain meaning of the claim language. Nothing in the definitions of the individual terms indicates that the acid component, as a whole, or the mixture of citric acid and malic acid, in particular, needs to be added separately to the juice. For example, reference to dictionaries makes clear that a "component" is simply an element that is present as part of the whole. *See App., Ex. 11.* The dictionary definitions of this term do not require that the element at issue be added to anything. Likewise, the dictionary definitions of "mixture" establish that the term simply describes a composition of matter that consists of multiple substances. *See App., Ex. 12.* The definitions of "mixture" do not require that the substances at issue be added either to one another or to some other substance. Accordingly, contrary to Coca-Cola's position in this litigation, the plain meaning of the terms in the disputed phrase makes clear that the acid component, as a whole, and citric acid and malic acid, in particular, are merely constituent elements of the final product that may be present naturally, may be added, or both.

P&G's construction of Claim 1(b) is also consistent with the '847 patent specification. Indeed, the specification expressly asserts that the term "acid component" is synonymous with "total acids," App., Ex. 1, col. 6, lines 1-2, and that "[f]or the purposes of the present invention,

‘total acids’ include those naturally present, plus any acids added.” *Id.*, col. 6, lines 4-6.¹⁰

Moreover, the specification elsewhere recognizes that “[o]range juice naturally contains a mixture of citric acid and malic acid.” *Id.*, col. 2, lines 16-18 (emphasis added). Thus, one could obtain a product with the claimed acid content based on the acids naturally present in the juice or one could do so by combining the acids naturally present in the juice with other exogenous sources of acids. The patent specification most assuredly does not require that, in arriving at the claimed acid component, one must add acids. In fact, the specification expressly and plainly states the opposite – “‘total acids’ include those naturally present, plus any acids added.” *Id.*, col. 6, lines 5-6 (emphasis added).

Moreover, nowhere in the portion of the specification discussing the products of the invention is there any reference at all to the required addition of either citric acid or malic acid.¹¹ In describing the composition of the acid component, the relevant portion of the specification states that “[t]his acid component comprises a mixture of citric acid and malic acid,” which are “present” in various forms. App., Ex. 1, col. 5, lines 59-63 (emphasis added). The portion of the specification that discusses the properties of the acid component of the product says nothing about the addition of citric acid and malic acid. Rather, the use of the word “present” in this context reinforces the fact that the phrase “acid component comprising a mixture of citric acid

¹⁰ Indeed, because P&G expressly defined the term “acid component” in the specification, it arguably acted as its own lexicographer with respect to this claim term. Given that the definition in the specification is consistent with the plain meaning of that term, it is not necessary to rely on this exception to the presumption in favor of plain meaning. However, this serves as an alternative basis for accepting P&G’s construction.

¹¹ Section C of the Disclosure of the Invention, (*id.*, col. 5, line 18 – col. 8, line 5), is entitled “Calcium Supplemented Fruit Juice Beverages and Juice Concentrates” and provides a written description of the claimed invention. Section D of the Disclosure of the Invention (*id.*, col. 8, line 6 – col. 11, line 30) is entitled “Method for Preparing Calcium Supplemented Fruit Juice Products.” This section sets forth the preferred method for preparing fruit juice beverages and fruit juice concentrates of the present invention. *See id.*, col. 11, lines 26-30. For sure, this preferred method entails the addition of citric acid, malic acid, and calcium to water to form a premix that is then added to juice. This fact, however, is irrelevant to a proper construction of the product claims of the ‘847 patent because, although a patentee is required to disclose a preferred method of practicing the invention, it is axiomatic that the scope of the invention is not limited to such preferred embodiment. *Brookhill-Wilk I*, 334 F.3d at 1301.

and malic acid” is concerned with the composition of the final product and establishes no limitation or requirement as to the source of the acids.

Similarly, the specification makes clear that the phrase “mixture of citric acid and malic acid” means only that such acids are present in the final product. According to the specification, “[o]range juice naturally contains a mixture of citric acid and malic acid.” *Id.*, col. 2, lines 16-18 (emphasis added). By definition, this language makes plain that citric acid and malic acid are naturally present in orange juice, and are not required to be “added” thereto. By using the identical language in Claim 1(b) – “acid component comprising a mixture of citric acid and malic acid” – the patentee clearly provided that the acid component limitation could be satisfied by naturally occurring acids alone, and not that such acids must be “added”.

Finally, nothing in the prosecution history warrants a construction of the phrase “acid component comprising a mixture of citric acid and malic acid” contrary to the plain meaning proposed by P&G. Throughout the prosecution of Claims 1-18 of the patent, P&G distinguished the relevant prior art by reference to the composition of the final products taught by such art, and did not rely on the presence or absence of “added” acids as a distinguishing characteristic. Accordingly, P&G’s position during prosecution of the ‘847 patent is entirely consistent with its present construction of the language of Claim 1(b).

B. “Fruit Juice Beverage”

‘847 claim element: Claim 1 claims a calcium-supplemented single-strength “*fruit juice beverage*.” App., Ex. 1, col. 13, lines 15-16.

P&G’s construction: A “fruit juice beverage” is a fruit juice product that is in a single-strength, ready-to-serve, drinkable form.

Various dictionary definitions exist for the term “beverage.” *See, e.g.*, App., Ex. 14, MERRIAM WEBSTER’S COLLEGIATE DICTIONARY (10th ed. 1993) (beverage: “a drinkable

liquid”); THE AMERICAN HERITAGE DICTIONARY SECOND COLLEGE EDITION (1985) (beverage: “Any of various liquids for drinking, usually excluding water”).

In this instance, however, P&G chose to be its own lexicographer, clearly and expressly defining the term “fruit juice beverage” in the specification. That is, the specification provides as follows:

As used herein, the term “fruit juice beverage” refers to a fruit juice product which is in a single-strength, ready-to-serve, drinkable form.

App., Ex. 1, col. 4, lines 44-46 (emphasis added). Because P&G clearly and expressly set forth a precise definition of this claim term in the specification, that definition controls. *Guttman*, 302 F.3d at 1360; *Renishaw*, 158 F.3d at 1249; *Vitronics*, 90 F.3d at 1582.

P&G’s definition of “fruit juice beverage” is entirely consistent with the object of the invention, which was “[t]o achieve greater consumption of calcium” by developing “a more appealing alternative to milk.” App., Ex. 1, col. 1, lines 45-46. Simply adding calcium to fruit juice would be of no value if the resulting product were unappealing. If the addition of calcium to fruit juice failed to produce a palatable product, then consumers would not be likely to consume that product in sufficient quantities to obtain nutritionally beneficial amounts of calcium. *See id.*, col. 1, lines 46-49. In such an event, the entire purpose Dr. Heckert was seeking to achieve would be defeated. Accordingly, the ‘847 patent describes fruit juice products that are nutritionally-supplemented with calcium, without negatively affecting the taste, odor, or appearance of the products. *See, e.g., id.*, col. 1, line 53 – col. 2, line 9. Thus, the claimed “fruit juice beverage” is expressly defined in the specification as being “drinkable.”

This definition of “fruit juice beverage” also is consistent with the prosecution history of the ‘847 patent. During prosecution of the ‘847 patent, the Patent Examiner initially rejected Claims 1-18 of the patent as obvious in view of United States Patent 3,114,641 (Sperti et al) in

combination with Japanese Patent Document 54-8767 (Kaji et al). *See* App., Ex. 9 at PGJ0013915. Sperti discloses extended juice products containing calcium chloride, among other things, in very small amounts (*i.e.*, below the level claimed in the '847 patent). *Id.* at PGJ0013899. Kaji discloses a soft drink containing the salts from food organic acids, such as calcium citrate, calcium malate, calcium lactate, and calcium tartrate. *Id.* at PGJ0013900. The beverages of Kaji contain little, if any, fruit juice, and, therefore, fail to meet the '847 patent's requirement of at least 45% fruit juice. *Id.* at PGJ0013934.

In response to the Patent Examiner's rejection of Claims 1-18, P&G distinguished the invention of the '847 patent from those of Sperti and Kaji in part by observing that, if the products disclosed by these patents were modified to contain the necessary levels of calcium and juice, the resulting products would be undesirable from the standpoint of taste and appearance. For example, with respect to Sperti, P&G explained that addition of calcium chloride to the Sperti products at levels sufficient to provide the calcium content claimed in the '847 patent would result in undesirable taste attributes, such as "excessive saltiness." *Id.* at PGJ0013933. With respect to Kaji, P&G noted that the addition of calcium at the levels disclosed by Kaji to drinks having the juice content claimed in the '847 patent would result in products with an undesirable appearance, such as "a brown, precipitated solid at the bottom" of the sample. *Id.* at PGJ0013934. In response to P&G's arguments, the Examiner withdrew her rejection and allowed Claims 1-18 to issue. *Id.* at PGJ0013954. Thus, during prosecution of the '847 patent, P&G made clear – and the Examiner accepted – that characteristics such as taste and appearance

were an important aspect of its invention and that products with undesirable taste and appearance were not within the scope of the invention.¹²

V. CONCLUSION

For the reasons set forth above, the Court should construe the disputed terms in accordance with the constructions offered by P&G.

Respectfully submitted,

THE PROCTER & GAMBLE COMPANY

By its attorneys,

/s/ Mark Vander Laan

Mark Vander Laan (Bar No. 0013297)
Dinsmore & Shohl LLP
1900 Chemed Center
255 East Fifth Street
Cincinnati, OH 45202-3172
(513) 977-8200

William F. Lee (admitted *pro hac vice*)
David B. Bassett (admitted *pro hac vice*)
Vinita Ferrera (admitted *pro hac vice*)
Mary Rose Scozzafava, Ph.D. (admitted *pro hac vice*)
Richard W. O'Neill (admitted *pro hac vice*)
Benjamin Stern (admitted *pro hac vice*)
Hale and Dorr LLP
60 State Street
Boston, Massachusetts 02109
(617) 526-6000

Dated: January 16, 2004

¹² Coca-Cola has indicated that it intends to argue to the contrary. Again, this position should not be surprising. Unless the claims of the '847 patent are construed to encompass products with undesirable taste, odor, and appearance, Coca-Cola will be unable to argue that its purported prior art anticipates the claims of the '847 patent.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing has been duly served via e-mail by the Court's Electronic System and via Facsimile upon the following:

Roger J. Makley, Esq.
Coolidge, Wall, Womsley & Lombard Co.,
L.P.A.
33 West First Street, Suite 600
Dayton, OH 45402

Robert L. Burns, Esq.
Finnegan, Henderson, Farabow, Garrett &
Dunner, L.L.P.
Two Freedom Square
11955 Freedom Drive
Reston, VA 20190-5675

/s/ Mark A. Vander Laan